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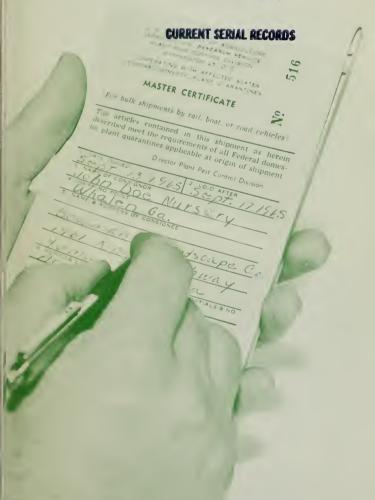


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# prevent the spread of PLANT PESTS

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### QUARANTINES

## prevent the spread of PLANT PESTS

Scores of plant pests constantly threaten our gardens, lawns, ornamentals, crops and even our great natural forests. For this reason, controlling and preventing the spread of these destructive pests is of direct concern to all of us—not just the farmers who produce our food and fiber.

Plant pests include insects, nematodes, snails, mites, and plant diseases. About 10,000 species of pests in this country can be classed as enemies. Approximately 100 species are highly destructive and about a dozen kinds cause 90 percent of the annual damage.

Some pests that might become serious problems are kept from reaching damaging numbers by measures to control or eradicate them or to prevent their spread.



#### HOW PLANT PESTS TRAVEL

New infestations of pests are more likely to get started through the activities of man than by their own movement. Because we travel more and faster these days and move plants, food, and fiber products in greater quantities, the danger of spreading plant pests is greatly increased. A pest that can move only a few inches a year under its own power may be moved on a bit of soil from coast to coast by jet aircraft in a few hours.

Plant pests are spread by the movement of diseased or infested plants, seeds, bulbs, crops, and soils. They also travel as "hitchhikers" on farm machinery, private and public conveyances, and on many other products they do not attack.

#### ALIEN PESTS ARE MOST DAMAGING

Many of our worst plant pests came from other countries, and thrived here because of abundant food and few natural enemies. Some imported pests include such damaging ones as the Japanese beetle, gypsy moth, boll weevil, European corn borer, Oriental fruit moth, European red mite, soybean cyst nematode, greenbug, and alfalfa weevil.

Plant diseases as well as insects cause problems. Stem rust of small grains is an example. This disease became a problem in the U.S. after early settlers brought barberry bushes—an alternate host plant of stem rust—with them from Europe. As barberry bushes were taken

westward, the rust disease moved into our important grain areas. An epidemic in 1916 caused the loss of an estimated 200 million bushels of wheat. This was more than 25 percent of the anticipated production of wheat for that year.

A fungus disease, chestnut blight, entered this country from Asia in 1904 and had wiped out the native chestnut tree about 35 years later.

#### QUARANTINE LAWS

The United States was one of the last major powers of the world to enact legislation to protect itself from foreign pests. The original Plant Quarantine Act, passed in 1912, and its subsequent amendments, companion laws, and State regulations now constitute one of the world's most effective and comprehensive regulatory systems dealing with the plant pest problem.

Under provisions of these laws, the battle against

damaging plant pests is fought by:

• USDA's Plant Quarantine Division, which works to prevent foreign plant pests from entering this country.

• USDA's Plant Pest Control Division, which, in cooperation with the States, works to eradicate or prevent the spread of plant pests within the United States.

State and Federal inspectors work together and may act for each other in enforcing quarantine regulations.

#### HOW QUARANTINES WORK

When a new infestation of a pest is discovered,

A certificate is issued to show that these Christmas trees are free of plant pests and can be moved safely to any destination.



Soil is removed from equipment before it is taken out of an infested area.

Federal and State officials move as quickly as possible to prevent spread of the pest and to control or eradicate it.

As an aid to this effort, Federal and State agencies may establish a quarantine. Infested areas may be treated to reduce pest populations in support of the quarantine action. Also, provision is made to regulate the movement of any article that might transport the pest from an infested to an uninfested area. This could include crops, nursery plants, or soil. Each article that might spread the pest is listed in the quarantine regulations.

Regulated articles may be allowed to move from quarantined areas if: (1) they are found to be free of the pest; (2) they are treated to eliminate the pest; or (3) it is determined that processing or other end use will eliminate the danger of spread.

Quarantines, therefore, allow the safe, orderly movement of regulated materials. This avoids the threat of embargoes by non-infested States, which might take such action to protect themselves from a destructive pest.

#### MOST SHIPPERS COOPERATE

Once shippers of regulated articles understand the purpose of a quarantine, most willingly comply with quarantine regulations. Articles found to be shipped in violation of regulations are removed from trade channels until quarantine requirements are met. Cases of willful violation are rare.

Dipping is one way to eliminate plant pests from nursery stock.









#### QUARANTINES CONFINE PESTS

During the past 25 years several foreign plant pests have been confined or eradicated by State and Federal action. For example, the khapra beetle, a serious pest of stored grains, was discovered in the Southwest and Mexico in the midfifties. Effective quarantines prevented its spread, and cooperative eradication efforts appear to have eliminated this pest from the Western Hemisphere.

A different kind of pest, witchweed, was discovered for the first time in this hemisphere in North Carolina in 1956. This parasitic plant attacks corn, sorghum, sugarcane, and about 140 additional species of plants in the grass and sedge families. Quarantines have confined it to limited areas in North Carolina and South Carolina. This pest would do untold damage if it got into the Corn Belt of the Central States.

Other foreign pests damage lawns and ornamentals, as well as farm crops in this country. Two such pests,

Japanese beetles and white-fringed beetles, are currently under quarantine.

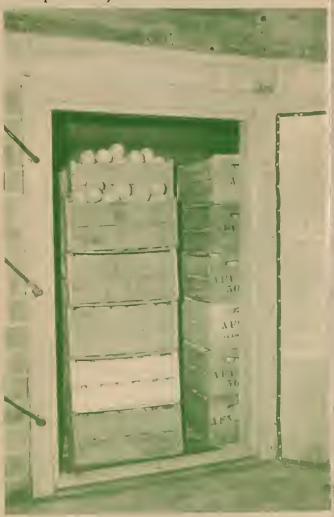
The Japanese beetle was first detected at Riverton, N.J., in 1916. The beetles feed on crops and the fruit and leaves of trees and ornamental plants. The grubs destroy the turf in lawns, golf courses and pastures. Although Japanese beetles spread rapidly, quarantine measures have retarded their spread into the Western States.

White-fringed beetles, natives of South America, were first discovered in this country in Florida in 1936. The grubs do the most damage, feeding on the roots of at least 385 agricultural and decorative plants. White-fringed beetles also spread and reproduce rapidly. However, quarantines and supporting control treatments in the States where the beetles are known to occur, have kept infestations limited to less than 1 percent of the total area.

Granular insecticides may be applied to infested nurseries.



Fumigation is an effective way to eliminate pests in fruit.





Applying creosote to sterilize gypsy moth egg masses.



Certificate used for domestic plant quarantines.

#### WHAT YOU CAN DO

You can help prevent the spread of plant pests by:

- Observing quarantine regulations.
- Consulting your local, State, or Federal plant pest control inspector or county agricultural agent to find out which quarantines affect your area.
- Destroying insects found "hitchhiking" on your baggage, clothing, and car when you travel.
- Reporting unusual or heavy pest infestations to your agricultural representative.

#### DETAILED INFORMATION

Anyone desiring more specific information on Federal domestic quarantines should contact the Plant Pest Control Division, Federal Center Building, Hyattsville, Md., 20782.

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